

IN THE SPECIFICATION

Please amend the paragraph starting at line 29 on page 8 of the specification as follows:

Fig. 2 illustrates the steps involved in an exemplary implementation of an algorithm for detecting when noise is present or absent which exhibits hysteresis. At step S1, the next electrogram sample $X(n)$ in the sequence of samples is obtained. At step S2, it is determined whether or not the sample $X(n)$ is a local peak LP. At step S3, a local peak density in a predetermined number of samples is calculated as a local peak count LPC which is the number of local peaks counted in a moving window of the last N samples. At step S4, the device checks whether the noise flag is set or not. If the noise flag is cleared, the local peak count LPC is compared with a first specified threshold value R at step S5. If the local peak count LPC does not exceed R , the device returns to step S1 to get the next sample. If the local peak count LPC is greater than R , then the noise flag is set at step S7a and the noise level is estimated by computing a noise statistic from a series of samples at step S7b before returning to step S1. If, at step S4, it is determined that the noise flag is set, the device compares the local peak count LPC with a second specified threshold value T at step S6, where the threshold value T is less than the threshold value R . If the local peak count LPC is not less than T , the device returns to step S1 to get the next sample. If the local peak count LPC is less than T , then the noise flag is cleared at step S8a and the noise floor is estimated by computing a noise statistic from a series of samples at step S8b before returning to step S1.